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ABSTRACT

Fifty-three supervisors in private sector firms and public sector organizations in central Ohio responded to questions about 16 aspects of productivity in the workplace. The firms and organizations with which these supervisors were associated had a history of hiring vocational-technical education graduates as well as those who had pursued other educational programs. The supervisors were asked first to indicate how important to productivity were each of 16 aspects of productivity. The ratings of each supervisor were compiled into a composite score; the 16 aspects were then ranked in order according to their importance to productivity. The five indicators of most importance to productivity were quality of products/services; regular, prompt attendance; additional responsibility; teamwork; initiative; and personal discipline. On one indicator, preparation for work, a majority of supervisors considered vocational-technical graduates superior. On the other 15, 25-48% thought that vocational-technical graduates were more productive than other persons. The five indicators for which vocational-technical graduates compared most favorably were additional responsibility; teamwork; preparation for work; quality of products/services; and adaptability. Indicators for which vocational-technical graduates compare least favorably were motivating other workers; requiring less direct supervision; able to learn new skills; regular, prompt attendance; and personal discipline. (Participating central Ohio employers and secondary and postsecondary schools and colleges are listed.) (Author/YLB)

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ASSESSING THE PRODUCTIVITY OF VOCATIONAL/TECHNICAL GRADUATES

By
Wayne E. Schroeder

OHIO COUNCIL ON VOCATIONAL EDUCATION
1990

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EXECUTIVE SUMMARY

Fifty-three supervisors in private-sector firms and public-sector organizations were asked to respond to questions about 16 aspects of productivity in the workplace. The firms and organizations with which these supervisors were associated had a history of hiring vocational/technical education graduates as well as those who had pursued other educationa. programs.

The 53 supervisors were asked first to indicate how important to productivity were each of 16 aspects of productivity. The ratings of each supervisor were compiled into a composite score, which permitted the 16 aspects to be ranked in order according to their importance to productivity.

The composite ranking indicated that supervisors said that productive employees:

1. Produce quality products/services
2. Are regular and prompt in attendance
3. Are team players
4. Have the right knowledge, skills, and attitudes
5. (tie) Are able to learn new skills
5. (tie) Exhibit good personal discipline
5. (tie) Exhibit initiative
8. Produce adequate quantities of products/services
9. Are adaptable to new assignments
10. Work independently of supervision
11. Meet or exceed time requirements
12. Accept additional responsibility
13. Contribute to work improvement
14. (tie) Motivate other workers
14. (tie) Have transferable knowledge and skills

16. Advance in the occupation

The 53 supervisors were then asked to make a comparison between the productivity of new vocational/technical graduates and other new employees. Specifically, they were asked to indicate whether the vocational/technical graduates were "more productive," "less productive," or "the same" as other new employees when first employed.

For each of the four aspects of productivity relating to preparation for work, these supervisors perceived vocational/technical graduates to be "more productive" than "less productive." However, many supervisors considered the productivity of the two groups to be "the same."

The supervisors who considered vocational/technical graduates to be "more productive" gave the highest percentages to the following aspects of productivity, in rank order:

1. Have the right knowledge, skills, and attitudes to perform the job

2. Are adaptable to new assignments

3. Have transferable knowledge and skills

4. Are able to learn new skills

Finally, the 53 supervisors were asked to make a comparison between the productivity of experienced vocational/technical graduates and other experienced workers. The comparisons were made between people in similar work positions.

For each of the 12 aspects of productivity relating to the effectiveness, efficiency, and attitude of experienced workers, supervisors perceived vocational/technical graduates to be "more productive" than "less productive." However, many supervisors considered the productivity of the two groups to be "the same."

The supervisors who considered vocational/technical graduates to be "more productive" gave the highest percentages to following aspects of productivity, in rank order:

- Effectiveness of experienced workers:

  1. Advance in the occupation

  2. Produce quality products/services

  3. Produce adequate quantities of products/services

4. Contribute to work improvement

- Efficiency of experienced workers:
  1. Meet or exceed time requirements
  2. Work independently of supervision
  3. Exhibit good personal discipline
  4. Are regular and prompt in attendance
- Attitude of experienced workers:
  1. Accept additional responsibility
  2. Exhibit initiative
  3. Are team players
  4. Motivate other workers

I INTRODUCTION

Looking at a crossection of the products of Ohio public vocational-technical education provides an exposure to wide diversity in both work settings and work itself. In one setting vocational-technical graduates test and adjust inertial guidance instruments for the nation's missile system. In another graduates shape the destinies of young children. Work settings employ a broad range of technology, and the nature and extent of its change affect the entire operating style of firms. Graduates can be found in work settings that specialize in design and production; in wholesale and retail sales; and in service.

Worker productivity is of paramount importance in all of these settings. But what does that mean, given the variety of settings and efforts? And how is worker productivity achieved, given a broad range of ways that persons move into the work force, through training prior to employment, and after employment?

The contributions of public vocational-technical education to productivity in the work place fit within this wider perspective. After several decades of experience in providing trained entry level workers, can it be claimed that vocational-technical graduates contibute sufficiently to productivity to justify the investment in their training?

This study was designed to seek responses to that question by measuring and analyzing the productivity of vocational-technical graduates in comparison with persons in similar positions who were not graduates of such programs. A second measurement examined productivity itself, and its relationship to the productivity of vocational-technical graduates.

Fifty three interviews with first line supervisors from Central Ohio firms and organizations were conducted to collect data for this study. A significant and unintended favorable outcome of this effort was the receptivity shown by all of these persons, in their willingness to participate in the study, and in their forthright and comprehensive responses.

II STUDY PROCEDURES

The overall purpose of this study was to assess the productivity of graduates from public secondary and postsecondary vocational-technical programs. The strategy for the study was to query knowledgable first line supervisors about their experience in the supervision of vocational-technical graduates; in assessing their productivity; and comparing them with other persons in similar positions. This was carried out through on-site interviews through a combination of structured and unstructured responses.

Identifying the first line supervisors involved several steps. One third of the schools in seven Central Ohio counties were asked to provide names of employers who had a history of hiring their vocational-technical graduates. Twenty-seven schools, including fourteen high schools, eleven career and joint vocational schools, and two postsecondary technical and community colleges responded with the names of nearly two thousand employers in Delaware, Fairfield, Franklin, Licking, Pickaway, and Union counties.

A sampling plan to select 45 employers was based upon representative size, socio-economic setting, geographic distribution, and service areas represented by graduates who were employed. While the study occured in a six-county area of Central Ohio, the sample reflected as much as possible a statewide profile of vocational-technical educatiion enrollment.

Letters of invitation were sent to the employers who had been selected, after calling each firm to determine who should receive the letter. Although selection of the employers was based in part upon the frequency of nominations by various schools, specific guidelines for participation were included in the letter to assure that knowledgeable persons were selected for the interviews. This caused a self-selection element to occur. The letter also invited prospective interviewees to contact the researcher to determine whether their participation would be appopriate. Several inquiries were received and in some cases a decision not to participate was made. Although a minimum number of 45 persons was established, 53 were actually interviewed.

An interview schedule was designed to structure the collection of perceptions of first line supervisors. Sixteen productivity indicators, divided into four sections;

preparation for work; effectiveness; efficiency; and attitude; formed the basis of two measurements. One collected perceptions of the degree to which vocational-technical graduates were "more," "same," or "less" productive than other persons in similar positions. The other inquired about the degree to which each of the sixteen indicators were "very," "average," or "less" important to productivity in the work setting of the respective interviewees. Comparisons of these two sets of perceptions became a major basis for data analysis. Additional insights were gained from open-ended questions that collected opinions regarding productivity in the work place; what the supervisors thought about public vocational-technical education; and what suggestions they had for its continued development.

III FINDINGS

The findings of this study are based upon structured interviews with 53 first line supervisors from Central Ohio firms. The firms represented a wide range of size and economic activity, and evidence of extensive experience in the employment and supervision of vocational-technical graduates.

Graduates supervised represented all service area specialties of vocational-technical education, including:

- 5% Agriculture, including agribusiness, ag engineering and horticulture
- 18% Business and Office, including accounting, business and secretarial
- 4% Health, including medical and optical
- 9% Home Economics, including child care, food service, and textiles
- 4% Marketing
- 46% Trade and Industrial Education, including air conditioning and heating, automotive, construction, cosmetology, electrical and electronics, fire and emergency medical, machine trades, sheet metal, and welding
- 14% Technical, including business, engineering and health

The number of responding firms represented the population profile of six Central Ohio counties; and included five respondents from Delaware, four from Fairfield, thirty from Franklin, ten from Licking, three from Pickaway, and one from Union County.

The 53 respondents were from firms ranging in size from 3 to 2850 employees, with an average of 224.

Experience with vocational-technical education graduates was also essential to the study. Graduates ranged from 1-500 in the firms with an average of 26. The firms reported hiring graduates for an average of 11 years, with a range of 2 to 28 years.

The success of the study depended heavily upon interviews with persons who had supervised vocational-technical education graduates. The 53 representatives of firms who responded to the study currently supervised an average of nine graduates, with a range of one to 75. Their experience in supervising graduates averaged nine years, with a range of one to 30. Slightly over half of the supervisors have been or are still active cooperators with vocational-technical education student placement programs. About one fourth have served on advisory committees for vocational-technical programs. Several also reported serving as speakers at student career days as well. Six of the supervisors were themselves graduates of vocational-technical education.

The perceptions of first line supervisors are presented in the sections which follow. The responses are divided into two sections. The first section focuses upon the responses to four statements that relate to the productivity of vocational-technical graduates as new workers, and reflects upon their training prior to employment. The second section contains the responses to twelve indicators that reflect upon productivity of vocational-technical graduates as experienced workers.

III-A NEW VOCATIONAL-TECHNICAL GRADUATES AND PRODUCTIVITY

Four questions were asked of supervisors to determine whether new vocational-technical graduates were "more," "the same," or "less" productive than other persons when first taken into the firm. Since the questions represented indicators of productivity they were also asked to judge how important each was to their respective work settings. The four indicators are:

* Have right knowledge, skills, and attitudes to perform the job
* Are adaptable to new assignments
* Have transferable knowledge and skills
* Are able to learn new skills

How supervisors compared new vocational-technical graduates to "other persons" was inflenced by several things. One was the variety of other worker backgrounds upon which the comparison was based. New vocational-technical graduates were compared in some cases with other recent high school graduates who were entering their first full-time job, but had no special vocational preparation. In such cases entry level skills were either less demanding, or the skills required were considered to be so specific to the firm that all new hires were given the same orientation or training within the work setting, regardless of previous training. Another group of other persons comprised those who had extensive experience in another firm. Their skills encompassed a very wide range, and included some who were attracted to another firm because of particular skills needed, to others where workers changed jobs for a variety of reasons, but where particular skill levels of newly hired persons were not viewed as a major factor.

Whether each indicator was perceived to the "very," "average," or "less" important to the productivity of new workers, with or without prior training and experience, seemed to be most affected by the character of a particular work setting, including such things as the level of skill required upon entry; and the amount of technological change and its relative effect upon worker change and adaptability. It was also influenced by the extent to which employers depend upon in-plant training because of special requirements for firm-specific skills.

Findings for each of the four indicators follow.

III-A-1 RIGHT KNOWLEDGE, SKILLS, AND ATTITIDES TO PERFORM THE JOB?

VoTech Grads vs Other Persons	More	55%	XXXXXXXXXXX
	Same	32%	XXXXXXX
	Less	13%	XXX
Importance to Productivity	Very	73%	XXXXXXXXXXXXXXX
	Average	17%	XXX
	Less	10%	XX

The intent here was to ask supervisors about the overall fitness of new vocational-technical graduates at the time of initial job entry; and more than half of them thought that these did possess more of the right knowledge, skills, and attitudes than other persons in similar positions. Vocational-technical graduates were generally perceived to be more productive than others in settings where; more specialized skills were needed and the firm depended on outside trained persons; graduates were more career minded; and when graduates exhibited favorable work attitudes.

Graduates were thought to be the same as others when less specialized training was required; or when they were not perceived to be particularly strong in their technical preparation or possess favorable work habits and attitudes.

Graduates thought to be less productive than others were competing with persons for the most part who had long experience, and where experience itself was a major contributor to job success.

Three fourths of the supervisors considered this indicator to be very important to productivity for new employees, somewhat more than actually occurs in practice. Those who responded with average or less importance to productivity for the new employee were from settings where lower levels of training for job entry were required, and/or where much of the training was specific to the needs of a particular firm. In such cases, having a trainable person was considered to be more important.

III-A-2 ARE ADAPTABLE TO NEW ASSIGNMENTS?

VoTech Grads vs Other Persons	More	43%	XXXXXXXXX
	Same	51%	XXXXXXXXXXX
	Less	6%	X
Importance to Productivity	Very	56%	XXXXXXXXXXX
	Average	42%	XXXXXXXX
	Less	2%	X

Slightly less than half of the supervisors indicated that new vocational-technical graduates are more adaptable to new assignments than other persons. Some expressed the opinion that adaptability is more of a basic human trait, and not so much influenced by training.

Adaptability by new employees is considered to be more important in settings where persons occupy several roles, particularly in smaller firms. In larger firms new employees normally settle into one major role, and adaptability is not viewed as less important.

III-A-3 HAVE TRANSFERABLE KNOWLEDGE AND SKILLS?

VoTech Grads vs Other Persons	More	36%	XXXXXXX
	Same	53%	XXXXXXXXXXX
	Less	11%	XX
Importance to Productivity	Very	36%	XXXXXXX
	Average	55%	XXXXXXXXXXX
	Less	9%	XX

Vocational-technical graduates as new employees were not perceived to excell over other persons in transferability of their skills.

Skill transferability was not viewed as of great importance by employers

III-A-4 ARE ABLE TO LEARN NEW SKILLS?

VoTech Grads vs Other Persons	More	26%	XXXXX
	Same	68%	XXXXXXXXXXXXX
	Less	6%	X
Importance to Productivity	Very	68%	XXXXXXXXXXXXX
	Average	32%	XXXXXX
	Less	-	

Of the four indicators of productivity for new employees, this one showed the greatest discrepancy between the performance of vocational-technical graduates, and the perceived importance of it to productivity. Only about one fourth of the supervisors thought that these persons excelled over other new employees when learning new skills. Comments on this matter suggested that the ability to learn new skills is probably more a result of individual ability and attitude than whether previous training has been received by a person.

The importance attached by the supervisors to learning new skills has to do with the large amounts of firm-specific training that is given to new employees, whether or not they are products of vocational-technical education. The persons interviewed frequently elaborated on this point by descriptions of a broad range of informal to formal training efforts by their firms. This can extend to requiring certified apprenticeship programs for both vocational-technical graduates and non-graduates, depending upon the skill levels associated with particular occupations.

III-B EXPERIENCED VOCATIONAL-TECHNICAL GRADUATES AND PRODUCTIVITY

Whether graduates of vocational-technical education perform in a superior manner after experience is the object of attention in this section of the study. Twelve indicators provided the basic format for questions during the interviews with 53 supervisors. These indicators were divided into four groups as follows:

EFFECTIVENESS

* Produce adequate quantities of products/services
* Produce quality products/services
* Advance in the occupation
* Contribute to work improvement

EFFICIENCY

* Are regular and prompt in attendance
* Meet or exceed time requirements
* Exhibit good personal discipline
* Require less direct supervision

ATTITUDE

* Accept additional responsibility
* Exhibit initiative
* Are team players
* Motivate other workers

III-B-1 PRODUCE ADEQUATE QUANTITIES OF PRODUCTS/SERVICES?

VoTech Grads vs Other Persons	More	40%	XXXXXXXX
	Same	54%	XXXXXXXXXXX
	Less	6%	X
Importance to Productivity	Very	62%	XXXXXXXXXXXX
	Average	36%	XXXXXXX
	Less	2%	X

Vocational-technical graduates continued to be more productive than other experienced persons in similar positions according to 40% of the supervisors who participated in this study. Slightly over half of the supervisors thought that little or no difference existed after both groups had reasonable amounts experience. Those who thought vocational-technical graduates were superior cited such evidence as graduates being more career-oriented, and continuing to show evidence of superior training including related knowledge that was responsible for a long-term effect upon their performance. Such instances were sited mostly where higher levels of technical skills were required. This contrasts with those who thought little or no difference existed after experience, and in reference to occupations that require less sophisicated skill and knowledge levels for performance.

Over 60% of the responding supervisors did indicate that the quantitative side of production of products/services was very important, a somewhat higher level than that achieved by vocational-technical graduates. Such indicators were given in work settings where marketplace competition requires maximum production, frequently with tight deadlines to complete particular jobs. Average importance to quantity of production was normally cited in settings where more of a normal routine can be observed, and especially when high quality is required, sometimes at the expense of quantity.

III-B-2 PRODUCE QUALITY PRODUCTS/SERVICES?

Votech Grads vs Other Persons	More	45%	XXXXXXXXXX
	Same	49%	XXXXXXXXX
	Less	6%	X
Importance to Productivity	Very	94%	XXXXXXXXXXXXXXXXXX
	Average	6%	X
	Less	-	

In contrast to quantity, a few more supervisors thought that experienced vocational-technical graduates perform at a higher level of quality than experienced other persons, whereas both groups were considered equal by half of the supervisors. Those who indicated lower quality for graduates reflected a few instances in which graduates, though experienced, were compared with persons of very long experience in highly specialized skill areas who were credited with an extremely strong work ethic.

It is noteworthy that producing quality products/services was considered very important to productivity by 94% of the responding supervisors, the highest of all of the sixteen productivity indicators utilized in this study. Supervisors also exhibited the highest degree of agreement in their response to this indicator as well.

III-B-3 ADVANCE IN THE OCCUPATION?

VoTech Grads vs Other Persons	More	46%	XXXXXXXXXX
	Same	43%	XXXXXXXX
	Less	11%	XX
Importance to Productivity	Very	34%	XXXXXXX
	Average	47%	XXXXXXXXXX
	Less	19%	XXXX

Nearly half of the supervisors queried indicated that vocational-technical graduates were more able to advance in an occupation than other persons, while slightly less thought that the two groups showed no difference. Those supervisors who indicated less ability for graduates were reflecting mainly on experiences where graduates were not considered particularly proficient.

Supervisors did not attach as high a priority to advancement as they did with most of the other indicators; with only about one third indicating that it was very important, while about one fifth considered it to be less important. The supervisors' comments revealed several reasons. In some work settings advancement is very important to productivity if there is a particular advantage to having employees advance with cumulative knowledge and skill from a particular firm. In other settings the work is specialized and highly skilled to a point where there is no particular advantage to either the employee or the firm for some persons to advance. In still other situations, particularly where more modest skill and knowledge is required, positions are temporary as employees "pass through" for brief periods in their work history.

III-B-4 CONTRIBUTE TO WORK IMPROVEMENT?

VoTech Grads vs Other Persons	More	36%	XXXXXXX
	Same	56%	XXXXXXXXXXX
	Less	8%	XX
Importance to Productivity	Very	45%	XXXXXXXXX
	Average	51%	XXXXXXXXXX
	Less	4%	X

Slightly more than one third of the supervisors indicated that vocational-technical graduates contributed more to work improvement than other persons in similar positions. At the same time over half thought that little or no difference existed between the two groups. Graduates who contributed more were credited with having a broader perspective as a result of both formal training and experience, and worked in settings where considerable scope existed for improving existing operations. Settings which showed no difference between the two groups in some cases had less opportunity for improving work, or where employees sometimes are not given as much opportunity for implementing ideas. There were also indications that some persons in both groups were not as likely to make suggestions publicly.

The importance of work improvement to productivity was viewed quite differently by various supervisors, but on average was the least important indicator of productivity of all the sixteen indicators in this study. Differences seemed to be associated with the nature of work performed, and the degree to which there was a potential for change, and to some extent management styles that differed regarding the involvement of workers in work improvemnt activities.

III-B-5 ARE REGULAR AND PROMPT IN ATTENDANCE?

Vo-Tech Grads vs Other Persons	More	26%	XXXXX
	Same	68%	XXXXXXXXXXXXXX
	Less	6%	X
Importance to Productivity	Very	81%	XXXXXXXXXXXXXXX
	Average	19%	XXXX
	Less	-	

Only about one fourth of the supervisors perceived vocational-technical graduates to be more regular and prompt in their attendance at work than other persons, whereas almost 70% considered both groups to be about the same. Graduates who were more prompt were thought to have stronger career motivation, or possess a stronger work ethic than persons who were less prompt. Generational differences were also cited as a possible cause of these results, whereby other persons who were older would equal or surpass the promptness of graduates, although experienced, were in many cases younger, and therefore not thought to possess attitudes favorable to such things as promptness.

Promptness was reported to be very important to productivity in the work place by over 80% of the supervisors questioned. This discrepancy between employee behavior and what supervisors said was important to productivity was one of several in the study that provoked comments about a need for better attitudes and commitment to work, especially by younger workers.

III-B-6 MEET OR EXCEED TIME REQUIREMENTS?

VoTech Grads vs Other Persons	More	34%	XXXXXXX
	Same	62%	XXXXXXXXXXXX
	Less	4%	X
Importance to Productivity	Very	53%	XXXXXXXXXX
	Average	45%	XXXXXXXXX
	Less	2%	X

About one third of the respondents considered vocational-technical graduates to be more proficent in getting work completed on or before time limits than other persons, while over 60% thought the two groups behaved the same. More formal training was thought to be overridden by the effect of experience, and to some extent a reflection of workers' attitudes about working steadily.

Slightly over half of the supervisors considered that meeting or exceeding time limits for work performed was very important, but almost all of the others rated it as of average importance. From their comments it would seem that work place differences about the relative importance of quantity and quality to productivity would influence this indicator as well.

III-B-7 EXHIBIT GOOD PERSONAL DISCIPLINE?

VoTech Grads vs Other Persons	More	32%	XXXXXX
	Same	58%	XXXXXXXXXXXX
	Less	10%	XX
Importance to Productivity	Very	68%	XXXXXXXXXXXXX
	Average	32%	XXXXXXX
	Less	-	

Approximately one third of the supervisors thought that vocational-technical graduates exhibited more personal discipline than other persons, while almost 60% thought there was little or no difference between the two groups. Most of those queried thought that good personal discipline is motivated more by human differences in attitude and motivation from whatever cause, than by the amount of formal job training received.

Almost 70% did state that good personal discipline was very important to productivity. This was especially true when independent action such as client contact and service was required. There were some though fewer comments about low-risk and work situations generally out of the public eye where personal discipline can be more informal and relaxed without jeopardizing productivity.

III-B-8 ABLE TO WORK MORE INDEPENDENTLY OF SUPERVISION?

VoTech Grads vs Other Persons	more	34%	XXXXXXX
	Same	47%	XXXXXXXXX
	Less	19%	XXXX
Importance to Productivity	Very	55%	XXXXXXXXXXX
	Average	43%	XXXXXXXX
	Less	2%	X

Independence of supervision is frequently desired if not required in the work place. Of interest here was whether vocational-technical education helps persons to become more independent in their work.

About one third of the 53 supervisors responding gave credit to vocational-technical graduates for being more independent than other workers, while almost half thought that formal training did not matter. Comments by the supervisors were mixed on this issue. Some thought that the selection and training process associated with vocational-technical education produced some graduates who were superior on the matter of working more independent of supervision. Other supervisors stated that this ability stemmed more from an individual's personality, and that formal training was not a major factor.

Supervisors did rate independence as more important to productivity than how well vocational-technical graduates actually perform. While work place variations do occur, many examples were cited by supervisors in which employees' normal work depends upon absence of supervision for extended periods of time. Because workers are often in direct contact with customer clients, or vendors, their independent actions are critical to the productivity of the firm. Likewise, there some instances cited in which normal work occurs in the presence of close supervision, and independence of action by workers is considered less critical to productivity.

III-B-9 ACCEPT ADDITIONAL RESPONSIBILITY?

VoTech Grads vs Other persons	More	49%	XXXXXXXXXX
	Same	47%	XXXXXXXXXX
	Less	4%	X
Importance to Productivity	Very	51%	XXXXXXXXXX
	Average	45%	XXXXXXXX
	Less	4%	X

The 53 responding supervisors were almost evenly divided as to whether vocational-technical graduates were more or equal to other persons regarding the acceptance of greater responsibility at work. Comments by these persons pointed mainly to attitudinal differences that affect worker behavior. Supervisors who indicated that graduates accept more responsibility cited greater motivation for jobs that offer promising careers as a major reason. Supervisors who indicated no difference frequently described settings where younger vocational-technical graduates were compared to older workers who were highly dedicated to the firm.

The importance of accepting additional responsibility to productivity also drew an almost equal division of reaction from the supervisors. Settings where accepting additional responsibility was considered important included firms that do contract work, or have some circumstances that cause sudden shifts in work load. Supervisors who indicated average for the importance of this indicator tended to describe work operations that were more stable, and many times in larger and more highly strucured firms.

III-B-10 EXHIBIT INITIATIVE?

VoTech Grads vs Other Persons	More	42%	XXXXXXXX
	Same	50%	XXXXXXXXXX
	Less	8%	XX
Importance to Productivity	Very	68%	XXXXXXXXXXXX
	Average	32%	XXXXXXX
	Less	-	

This indicator differs slightly from the previous one in that initiative refers to an approach taken to regular assignments rather than to additional responsibility. However, the responses of supervisors were about the same on both, as they were also about equally divided as to whether vocational-technical graduates exhibit more initiative than other persons. The slightly higher percentage of supervisors who indicated no difference pointed to the strong work ethic exhibited by many in the other persons group, especially among the highly skilled older workers.

The supervisors attached more importance to productivity for this indicator than is evidenced by the superior behavior of vocational-technical graduates. They also considered exhibiting initiative more important to productivity than the previous indicator, accepting additional responsibility. Here differences in work settings suggest that more firms strive for and perhaps achieve stable operations whereby exhibiting initiative on regular assignments is more the norm than requiring employees to assume additional responsibility.

III-B-11 ARE TEAM PLAYERS?

VoTech Grads vs Other Persons	More	43%	XXXXXXXXX
	Same	55%	XXXXXXXXXXX
	Less	2%	X
Importance to Productivity	Very	79%	XXXXXXXXXXXXXXX
	Average	19%	XXXX
	Less	2%	X

Slightly less than half of the responding supervisors indicated that vocational-technical graduates make superior team players than other persons, while a bit more than half thought that no difference existed between the two groups. Supervisors who considered graduates to be better team players suggested that vocational-technical education experience was a likely cause, because the educational process probably prepared them for greater acceptance of cooperative activities. Some supervisors expressed the feeling that human cooperation is to some extent a behavior for which training may have only a very limited effect.

Nearly 80% of the responding supervisors considered this indicator as very important, citing many instances where cooperative activity by workers is essential to the firm's overall productivity. This expression exceeded somewhat the perceived behavior of vocational-technical graduates to demonstrate superiority because of their prior training.

III-B-12 MOTIVATE OTHER WORKERS?

VoTech Grads vs Other Persons	More	30%	XXXXXX
	Same	53%	XXXXXXXXXX
	Less	17%	XXX
Importance to Productivity	Very	40%	XXXXXXXX
	Average	47%	XXXXXXXXXX
	Less	13%	XXX

Less than one third of the supervisors thought that vocational-technical graduates were more active in motivating other workers than other experienced persons in similar positions, while slightly over half indicated that little or no difference existed between the two groups.

To some extent this difference may be influenced by the lower importance to productivity attached to motivating other workers. Only 40% of the supervisors indicated that this indicator is very important, slightly less than those who considered it to be of average importance. The fact that 13% thought motivating other workers was of less importance gave this indicator one of the lowest overall ratings of importance to productivity.

Differences in work settings accounted for much of these reactions to this indicator, according to the comments of responding supervisors. Some work settings are structured to depend heavily upon peer worker motivation, especially where cooperative group action is required, and where achievements of the group are affected by the achievements of individual workers. This is in contrast with settings in which singular action by individuals contribute most to productivity.

IV CONCLUSIONS

The conclusions which follow are based upon the formal responses to the structured and openended items in the interview schedule, as well the numerous comments of respondents during the course of the interviews.

There is a more positive perception about the basic importance of vocational-technical education than about the value of its present practice to enhance productivity in the work place. The supervisors were nearly unanimous regarding the former. On the latter, however, there was only one productivity indicator of sixteen for which over 50% of them thought that vocational-technical graduates were more productive than other persons. On the other fifteen indicators 25-48% of the supervisors thought that vocational-technical graduates were more productive than other persons.

The top five indicators for which vocational-technical graduates compared most favorably with other persons are; accept additional responsibility; are team players; have right knowledge, skills, and attitudes to perform job; produce quality products/services, and; are adaptable to new assignments.

The five indicators for which vocational-technical graduates compared least favorably with other persons are; Motivate other workers; require less direct supervision; able to learn new skills; are regular and prompt in attendance, and; exhibit good personal discipline.

The five indicators of most importance to productivity are; produce quality products/services; are regular and prompt in attendance; accept additional responsibility; are team players; exhibit initiative, and; exhibit good personal discipline.

The five indicators of least importance to productivity are; advance in the occupation; have transferable knowledge and skills; motivate other workers; contribute to work improvement, and; accept additional resonsibility.

Vocational-technical graduates are most appreciated in the work place when; special skills are especially needed, and recognized with satisfactory salary, benefits, and desirable working conditions; when graduates possess reasonable amounts of those skills; when graduates have what are generally referred to as desirable work habits, courtesy and respect;

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and when graduates tend to be career-motivated. The less that any or all of these conditions exist, the greater is the liklihood that vocational education makes less or no difference.

Many of the supervisors interviewed referred in various ways to a need to increase the realism of vocational-technical education, by; giving students a more realistic expectation of work place conditions; by providing skills that are as much as possible like those needed; and by requiring standards of personal behavior and work performance that are like those required on the job.

There is a discrepancy between the requirements of the work place to produce quality products and services for a profit through the efforts of a productive work force; and the public education system which has demands to provide educational opportunities for a diverse student population, and maximize their career opportunities.

V RECOMMENDATIONS

1. Identify two profiles of vocational-technical education graduates; one for the selection, training, and placement of persons who are considered successful in the work place; the other for persons who were not successful.

2. Investigate ways to make vocational-technical education more realistic to the work place; through the kind of technical knowledge and skills that are imparted; and the work standards and conditions that are associated with successful work.

VI CENTRAL OHIO EMPLOYERS THAT PARTICIPATED IN THE STUDY

The Andersons
5600 Alshire Road
Columbus

Avery Road Gardens
Amlin

Bowman Chevrolet
Hebron

Buehler's Market
Delaware

Bush Tool and Die, Inc.
Williamsport

Carter's Lawn & Garden
Marysville

The Central Trust Company
Newark

Charles E. Headlee, Inc.
Columbus

Columbus Bar Association
Columbus

Columbus Industries, Inc.
Ashville

Columbus Textiles
Columbus

Deer Creek Auto Parts
Williamsport

Defabco, Inc.
Columbus

ECLC Learning Centers
Worthington

Efficient Electric Shop
Columbus

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Equicor
Delaware

Exact Machine Corporation
Sunbury

Executone of Columbus
Columbus

Fairfield Metal Fabrication Company
Lancaster

Flxible Corporation
Delaware

Granville Research and Development Center
of the Dow Chemical Company
Granville

Hechinger Company
4001 Refugee Road
Columbus

J. C. Penney Catalog Distribution Center
Columbus

The J. T. Edwards Company
Columbus

KinderCare Learning Centers
5351 Cleveland Avenue
Columbus

Kroger Sav-On
1735 North Memorial Drive
Lancaster

Lennox Industries, Inc.
Columbus

Lens Crafters North - Store #003
Columbus

Mason Supply Company
Columbus

Mid-Ohio Air Conditioning Corporation, Inc.
Columbus

Newark Air Force Base
Newark

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Northland Terrace, Inc.
Columbus

Ohio Auto Club - AAA
Worthington
Ohio Department of Transportation District Five
Jacksontown

Ohio State Optical Company
Columbus

The Ohio State University Child Care Center
Columbus

Old Country Buffet
3834 East Broad Street
Columbus

Radisson Hotel
Columbus

Rockwell International
Newark

Saturday's Family Hair Care - RWS Enterprises
Columbus

Sears Service Center
Columbus

Shaeffer Tire Company
Lancaster

Spillman Company
Columbus

Super X Drug Store
Delaware

Tender Day Care
Carroll

Thurman Manufacturing Company
Columbus

United Refrigeration
Newark

Wacho Products Company
Columbus

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Westerville Division of Fire
Westerville

VII SECONDARY AND POSTSECONDARY SCHOOLS AND COLLEGES THAT PARTICIPATED IN THE STUDY

Beechcroft High School
Columbus

Brookhaven High School
Columbus

Centennial High School
Columbus

Central Ohio Technical College
Newark

Circleville High School
Circleville

Columbus State Community College
Columbus

Delaware Joint Vocational School
Delaware

Delaware Hayes High School
Delaware

Eastland Career Center
Groveport

Eastmoor High School
Columbus

Fort Hayes Metropolitan Education Center
Columbus

Franklin Heights High School
Columbus

Heath High School
Heath

Lakewood Senior High School

Lancaster Vocational High School
Lancaster

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Licking County Joint Vocational School
Newark

Fairbanks High School

Fairfield Career Center
Carroll

Marion-Franklin High School
Columbus

Marysville High School
Marysville

Northeast Career Center
Columbus

Northwest Career Center
Columbus

Paul Hayes Technical High School

Pickaway-Ross Vocational Center
Chillicothe

Southeast Career Center

Tolles Technical Center

Whetstone High School
Columbus